



AN OVERCOMPLETE WDFT SINUSOIDAL BASIS FOR PERCEPTUALLY MOTIVATED SPEECH ENHANCEMENT (ThuAmPO4)

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★ Abstract :

This paper considers an application of the warped discrete Fourier transform (WDFT) in the perceptually motivated speech enhancement. Namely, the problem of signal distortions generated by WDFT synthesis block is of interest. Spectral features of the reconstructed signal are analyzed and discussed in context of the perceptual processing. Our proposition is to construct an overcomplete WDFT sinusoidal basis in order to minimize reconstruction error. The new approach is validated in practical speech enhancement system. The results show that the proposed algorithm outperforms both conventional DFT and pure WDFT solutions.